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10/065,869

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Richard William Ira Yarger

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CANTOR COLBURN, LLP
55 GRIFFIN ROAD SOUTH
BLOOMFIELD, CT 06002

EXAMINER

DANG, DUY M

ART UNIT

PAPER NUMBER

2624

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/065,869

Applicant(s)

YARGER ET AL.

Examiner

Duy M. Dang

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/9/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,11-12,15-16,21-22, and 25-26 is/are rejected.
- 7) ☒ Claim(s) 3,4,7-10,13-14,17-20,23,24, and 27-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment filed on November 09, 2006 has been entered and made of record. Currently, claims 1-29 are pending.

Response to Arguments

2. Applicant's arguments filed on November 09, 2006 have been fully considered but they are not all persuasive.

-Applicant's amendment to claims 11-20 and arguments set forth at pages 14-15 overcome the rejection of claims 11-20 under section 35 USC §101.

-Applicant's amendment to specification claims 11-20 and arguments set forth at page 13 overcome the objection to the specification under section 37 CFR §1.71(a)

-Applicant's arguments set forth at pages 13-14 with regard to the rejection of claims 2, 6, 12, 16, 22, and 26 under section 35 USC § 112(2) have been fully considered but they are not persuasive. In response to applicant's arguments set forth at page 14, the examiner would like to offer the following reasons: (a)the rejection set forth in the previous Office action mailed on August 17, 2006 was not based on the "enablement" which corresponds to the 35 USC § 112(1); (b)It appears to be that applicant's arguments in response to 35 USC § 112(1) type rejection; (c)Thus, such argument is considered inadequate. In this case, each of claims 2, 6, 12, 16, 22, and 26 recites an equation which does not exist or is undefined when both "a" and "b" are equal to "0" (zero) and "c" is not equal to "0" (zero). When both "a" and "b" are equal to "0" (zero) and "c" is not equal to "0" (zero), the result of that recited/claimed equation is equal to infinity. Thus, this renders claims indefinite.

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-In reply to Applicant's arguments set forth at pages 16-19 with regard to the rejections of claims 1, 5, 11, 15, 21 and 25 under 35 USC § 102(e) based on Wahl's patent (USPN 6,359,960), the examiner would like to offer the following remarks: First, the claimed "sagittal plane" and "axial plane" are not specifically defined in the claim and the examiner is entitled to the broadest reasonable interpretation. So, any orthogonal planes meet claimed "sagittal plane" and "axial plane". In this case, the 3D representation of the 3D image of patient's head shown in figures 1 and 2 of Wahl et al. includes at least two orthogonal planes and therefore Wahl teaches the claimed features. Lastly, in figures 1-2 and column 4 lines 1-22 of Wahl, the 3D volume data set of the patient's head 1 is generated from a series of 2D projections of head 1 picked up by X-ray system which travels or moves on orbit K. Thus, 3D volume data of patient's head as shown in figure 1 does include image of patient's head from left or right of the patient's head and this refers to the so called "sagittal plane". This interpretation is consistent with applicant's disclosed specification page 5 line 4 or paragraph [0020]. Furthermore, the generating 3D volume data of patient's head as shown in figure 1 does inherently include image of patient's head from the top of the head of the patient this refers to the so called "axial plane".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2, 6, 12, 16, 22, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The advanced statements as set forth in paragraph 2 above are incorporated herein.

It is noted each of these claims recites an equation including parameters denoted as “a”, “b”, and “c”. However, each of these parameters a-c is not clearly defined as to what it refers to. Furthermore, the equation as recited in each of claims 2, 6, 12, 16, 22, and 26 does not exist or is undefined when both “a” and “b” are equal to “0” (zero) and “c” is not equal to “0” (zero). That is, when both “a” and “b” are equal to “0” (zero) and “c” is not equal to “0” (zero), the result of such claimed equation is infinity. Thus, this renders claims indefinite.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 5, 11, 15, 21, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Wahl et al. (USPN 6,359,960. Art of record filed 6/11/04 and referred as “Wahl” hereinafter).

The advanced statements as set forth in paragraph 2 above are incorporated hereinafter.

Regarding claim 1, Wahl teaches method of labeling orthogonal images (i.e., figures 1-2 and 5) comprising: identifying a primary image taken in a first sagittal plane (see figure 1 and col. 4 lines 14-22: note 3D volume data set acquired from the series of 2D projections; also see figure 2 for plurality of 2D projection planes denoted at P1-P4. Furthermore, the generating 3D volume data of patient’s head as shown in figure 1 does inherently include image of patient’s head from left or right of the patient’s head and this refers to the so called “sagittal plane”. This

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interpretation is consistent with applicant's disclosed specification page 5 line 4 or paragraph [0020]); identifying a plurality of secondary images taken in axial planes orthogonal to the first sagittal plane (see figure 1 and col. 4 lines 14-22: note 3D volume data set acquired from the series of 2D projections; also see figure 2 for plurality of 2D projection planes denoted at P1-P4. Furthermore, the generating 3D volume data of patient's head as shown in figure 1 does inherently include image of patient's head from the top of the head of the patient this refers to the so called "axial plane". This interpretation is consistent with applicant's disclosed specification page 5 line 6 or paragraph [0020]); associating a label to a point in the primary image (see markers 6', 9', 6, 9, 6.1-6.4, 7.1-7.4, 8.1-8.4, and 9.1-9.4 mentioned in col. 4 lines 23-43 and figures 1-2); calculating a distance from the point to a line of intersection between the primary image and each secondary image in the plurality of images (see figures 2, 5 and abstract); and associating the label to a secondary image in the plurality of secondary images having a line of intersection with the primary image closest to the point (see figures 2, 5 and col. 6 lines 55-67 and col. 7 lines 47-67).

It is noted that claims 11 and 21 recite similar features called for in claim 1 above. Thus, claims 11 and 21 are also rejected for the same reasons as set forth above.

Regarding claims 5, 15, and 25, it is noted that these claims recite similar features called for in claim 1 with additional of claimed "first and second labels". The advance statements applied to claim 1 above are incorporated herein. Wahl further teaches labels (see markers 6', 9', 6, 9, 6.1-6.4, 7.1-7.4, 8.1-8.4, and 9.1-9.4 mentioned in col. 4 lines 23-43 and figures 1-2. Note that any two markers mentioned in this cited portion refers to the so called first and second labels).

Allowable Subject Matter

7. Claims 2, 6, 12, 16, 22, and 26 are objected to as being dependent upon a rejected base claim and being rejected under 35 U.S.C. 112, 2nd paragraph set forth in this Office action, but would be allowable if rewritten (a)in independent form including all of the limitations of the base claim and any intervening claims and (b)to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

8. Claims 3, 4, 7-10, 13-14, 17-20, 23, 24, and 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten (a)in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach or suggest the claimed features as recited in claims 3, 4, 7-10, 13-14, 17-20, 23, 24, and 27-29.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M. Dang whose telephone number is 571-272-7389. The examiner can normally be reached on Monday to Friday from 6:00AM to 2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dmd
2/07


DUY M. DANG
PRIMARY EXAMINER